

In the Claims:

Claims 1 - 37 (Canceled).

38. (New) A cylinder head cover for covering a cylinder head of a combustion engine, the cylinder head cover defining a plane adapted to extend over the cylinder head, the cylinder head cover including a housing defining a first chamber and a second chamber and an oil separator providing fluid communication between the first chamber and the second chamber of the housing, the oil separator comprising:

at least one flow-through tube having an inlet and an outlet, the at least one flow-through tube defining a longitudinal axis that is not perpendicular to the plane defined by the cylinder head cover; and

at least one spiral segment disposed within the at least one flow-through tube, the at least one spiral segment comprised of thread surfaces that, together with an inner surface of the at least one flow-through tube, define at least one spiral flow path between the inlet and the outlet of the at least one flow-through tube.

39. (New) A cylinder head cover as defined in claim 38, wherein the at least one spiral flow path has a cross section of between 1 mm^2 and 800 mm^2 .

40. (New) A cylinder head cover as defined in claim 38, the oil separator comprising at least two flow-through tubes oriented parallel to one another.

41. (New) A cylinder head cover as defined in claim 38, wherein the longitudinal axis of the at least one flow-through tube is essentially parallel to the plane defined by the cylinder head cover.

42. (New) A cylinder head cover as defined in claim 38, further comprising at least first and second spiral segments aligned axially within the at least one flow-through tube.

43. (New) A cylinder head cover as defined in claim 42, wherein a rotational direction defined by the first spiral segment is generally opposite a rotational direction defined by the second spiral segment.

44. (New) A cylinder head cover as defined in claim 42, wherein the first and second spiral segments are spaced apart from one another along the longitudinal axis of the at least one flow-through tube.

45. (New) A cylinder head cover as defined in claim 42, wherein the first spiral segment defines at least a portion of the at least one spiral flow path, and wherein at least a portion of the second spiral segment projects into the portion of the flow path defined by the first spiral segment.

46. (New) A cylinder head cover as defined in claim 45, wherein at least one edge of the second spiral segment projecting into the spiral flow path defined by the first spiral segment comprises a flange directed opposite to the flow direction of the spiral flow path.

47. (New) A cylinder head cover as defined in claim 38, wherein the at least one flow-through tube comprises a plurality of spiral segments, the plurality of helical segments defining a plurality of flow paths within the at least one flow-through tube.

48. (New) A cylinder head cover as defined in claim 38, wherein the at least one spiral flow path defined by the at least one spiral segment forms an angle of approximately 45 degrees to the longitudinal axis of the at least one flow-through tube.

49. (New) A cylinder head cover as defined in claim 38, wherein the at least one spiral segment has a length and a pitch, and wherein the length is between approximately 0.5 and 2.5 times the pitch.

50. (New) A cylinder head cover as defined in claim 38, wherein the at least one flow-through tube is conically widened toward the inlet or the outlet or both.

51. (New) A cylinder head cover as defined in claim 38, wherein at least one spiral segment has an axial core that is conically thickened towards either end of the axial core.

52. (New) A cylinder head cover as defined in claim 38, wherein the distance between the axis of the at least one spiral segment and an inner face of the at least one flow-through tube becomes smaller in the axial direction.

53. (New) A cylinder head cover as defined in claim 38, wherein the radius of the at least one spiral segment becomes smaller in the axial direction, or the diameter of the at least one flow-through tube becomes smaller in the axial direction, or both.

54. (New) A cylinder head cover as defined in claim 38, wherein at least one channel formed in an inner surface of the at least one flow-through tube.

55. (New) A cylinder head cover as defined in claim 54, wherein the at least one channel is aligned in a generally axial direction.

56. (New) A cylinder head cover as defined in claim 38, wherein at least one channel is in the thread surface of the at least one spiral segment.

57. (New) A cylinder head cover as defined in claim 56, wherein the at least one channel is aligned in a general flow direction of a blow-by gas.

58. (New) A cylinder head cover as defined in claim 38, further comprising at least one web aligned in a generally axial direction, the at least one web being formed on a face of the at least one flow-through tube or on the thread surfaces of the at least one spiral segment.

59. (New) A cylinder head cover as defined in claim 38, wherein the pitch of the at least one spiral segments varies along the length of the spiral segment.

60. (New) A cylinder head cover as defined in claim 38, comprising at least first and second spiral segments disposed within the at least one flow-through tube, wherein the pitch of the first spiral segment differs from the pitch of the second spiral segment.

61. (New) A cylinder head cover as defined in claim 38, wherein the at least one spiral segment is displaced from at least one of the inlet and the outlet of the at least one flow-through tube.

62. (New) A cylinder head cover as defined in claim 38, wherein the flow-through tube is slanted relative to the plane defined by the cylinder head cover such that the inlet is above the outlet when the plane defined by the cylinder head cover is oriented horizontally.